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Fixed points of renormalization group for the hierarchical fermionic model

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Abstract

A fermionic version of Dyson's hierarchical model is defined. An exact renormalization group transformation is given as a rational transformation of two-dimensional parameter space. Two branches of nontrivial fixed points are described, one of which bifurcates from the trivial "Gaussian" branch. The existence of the thermodynamic limit for these branches of fixed points is investigated. © 1994 Plenum Publishing Corporation.

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Keywords

fixed point, Grassmann variables, hierarchical model, Renormalization group